

Effects of Long-Term Exposure to Violent and Sexually Degrading Depictions of Women

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used commercial films,
not "pure pornography"
- found X rated
"degrading" commercial films
don't affect subsequent attitudes
to women
unlike Zillman + Bryant, who used
"stag films", + found
a change in
attitude

coming alarmed about the fact that young people now have access to movies that appear to be extremely violent and often sexually degrading to women (Nordheimer, 1987). One concern is that continual exposure to media violence against women may cause viewers to become callous or desensitized to female victims of actual violence. Another concern is that prolonged exposure to certain types of pornographic materials might contribute to the development of negative and discriminatory attitudes about women. Several influential feminist writers (e.g., Dworkin, 1985; MacKinnon, 1986) maintain that pornography, even when not overtly violent, depicts women as subordinate to men, as existing solely for the sexual satisfaction of men, and as women as sexual objects.

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ated the effects of emotional desensitization to films of violence against sexually degrading explicit and nonexplicit films on beliefs about rape and of women. Male subjects viewed either two or five R-rated violent "slasher," "pornographic," or R-rated nonviolent teenage-oriented ("teen sex") films. Cognitive perceptions were measured after each exposure. Later, these men subjects completed a voir dire questionnaire, viewed a reenacted acquaintance sexual assault trial, and judged the defendant and alleged rape victim. Condition became less anxious and depressed and showed declines in negative were also less sympathetic to the victim and less empathetic toward rape per, longer film exposure was necessary to affect general empathy. There onse between the R-rated teen sex film and the X-rated, sexually explicit, o-exposure control conditions on the objectification or the rape trial vari- itization to media violence and the carryover to decision making about

agers revealed that
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women as subordinate results in acceptance of this view of women and may ultimately lead to subordinating and discriminating behaviors.

Prior Research

Prolonged Exposure to Sexually Violent Films

Most of the previous work on desensitization to media violence has involved exposure to rather mild forms of television violence for relatively short periods of time (e.g., Cline, Croft, & Courier, 1973; Thomas, 1982; Thomas, Horton, Lippencott, & Drabman, 1977). More recently, Linz, Donnerstein, and Penrod (1984) measured the reactions of college-age men to films portraying violence against women (often in a sexual context), viewed across a 5-day period.

ons of first and last day repeated exposure, ini- ased substantially. Fur- lms also changed from was previously judged as seen as significantly Subjects also indicated e material more with e effects generalized to a videotaped reenact- xposed to the sexually rely injured compared t al. suggested that the anxiety-provoking sit- undergoing exposure hat self-awareness of

Donnerstein investigates
"degrading"
(sort of)

reductions in anxiety and emotional arousal may be instrumental in the formation of other perceptions and attitudes about the violence portrayed in the films that are then carried over to other contexts.

A substantial body of literature now exists on the behavioral treatment of pathological fears. It demonstrates that simply exposing a patient to the situations or objects he or she is frightened of will significantly diminish the anxiety or negative affect that was once evoked by the objects or situations (Foa & Kozak, 1986; Ullman & Krasner, 1969). It has recently been proposed that exposure therapy is effective because it first evokes a fear memory (Lang, 1977, 1979). Once evoked, this memory is then available for some form of cognitive modification. Certain self-awareness processes have also been suggested as a contributing factor to the effectiveness of exposure therapy (Wilkins, 1971). Foa and Kozak (1986) have speculated that a patient's perception of his or her own habituation in the presence of a feared stimulus plays an important role in helping the patient habituate to that stimulus. Self-awareness of reduced anxiety may provide the patient with information that short-term physiological habituation has occurred and leads to dissociation of response elements from stimulus elements of the fear structure. The new information might also facilitate changes in negative valence associated with the feared stimulus. Patients may also begin to evaluate the "badness" of the feared stimuli in a less exaggerated manner.

Similar processes may operate when subjects are repeatedly exposed to graphic media violence. Once viewers are emotionally comfortable with the violent content of the films, they may also evaluate the film more favorably in other domains. Material originally believed to be offensive or degrading to the victims of violence may be evaluated as less so with continued exposure. A reduction in the level of anxiety may also blunt viewers' awareness of the frequency and intensity of violence in the films. Reductions in anxiety may serve to decrease sensitivity to emotional cues associated with each violent episode and thereby reduce viewers' perceptions of the amount of violence in the films. Consequently, by the end of an extensive exposure period, viewers may perceive aggressive films as less violent than they had initially. These altered perceptual and affective reactions may then be carried over into judgments made about victims of violence in other more realistic settings.

Prolonged Exposure to Sexually Explicit Films

Early studies of long-term exposure to sexually explicit materials that contain no overt violence (e.g., Howard, Reifler, & Liptzin, 1971; Mann, Berkowitz, Sidman, Starr, & West, 1974) suggested that continued exposure resulted in initial stimulation of more frequent sexual behavior in adult viewers with their married partners, but the effect rapidly dissipated. In these studies, no significant changes in attitudes about pornography itself or sex in general were observed with repeated exposure. More recent research by Zillmann and Bryant (1982, 1984) has suggested that long-term exposure (4 hr and 48 min over a 6-week period) to nonviolent but degrading pornography that depicts women in sexually submissive roles may cause male and female subjects to (a) become more tolerant of bizarre forms of pornography, (b) become less supportive of statements about

sexual equality, and (c) become more lenient in assigning punishment to a rapist whose crime is described in a newspaper account.

Zillmann and Bryant (1982, 1984), as well as others (e.g., Berkowitz, 1984), have maintained that continued exposure to explicit depictions of women engaged in sexual activity may activate thoughts about female promiscuity in viewers. Greater availability of these thoughts in memory (Tversky & Kahneman, 1973) may lead to inflated estimates of women's tendency to desire and engage in unusual and abnormal sexual activities, including rape. The probability that these ideas will be accessed and used in evaluations of women will increase as a subject is exposed to more of these behaviors in movies.

Thus, research so far suggests that prolonged exposure to sexually violent and sexually degrading depictions may result in at least two separate effects. Prolonged exposure to sexual violence may undermine emotional reactivity to both the violence portrayed in the films and to the suffering of female victims portrayed in more realistic contexts. Subjects exposed to sexual violence appear to experience decreases in anxiety during exposure to the films themselves and may well experience blunted affective reactions to victims in other circumstances, feeling less sympathy, less empathy, and judging them as less psychologically and physically injured. Prolonged exposure to nonviolent but sexually degrading depictions, on the other hand, might result in greater accessibility of ideas about women as sex objects or as sexually promiscuous.

The Present Study

Three Film Types

In the present study we examined the effects on male viewers of prolonged exposure to three types of filmed depictions of women: (a) those that are overtly violent, (b) those that are not overtly violent but are sexually explicit and arguably depict women as sexually degraded objects, and (c) those that are not sexually explicit but, like the sexually explicit material, nearly always portray women as sexual objects. After exposure to the films, the men were asked to render judgments about women in general and about an alleged female victim of sexual assault and the accused assailant in a reenactment of a legal trial.

The violent films used in this study were R-rated, full-length, commercially released films that contained scenes of explicit violence primarily directed toward women, often occurring during or juxtaposed to mildly erotic scenes. These films are often referred to as "slasher films" (Maslin, 1982). This study attempts to answer two main questions concerning emotional reactions to these films: First, do male viewers habituate or become desensitized to graphic depictions of violence as a result of continued exposure? Second, if this desensitization or habituation occurs, does it spill over into other contexts involving affective reactions? That is, will individuals who become desensitized to filmed violence against women have less empathy for female victims of violence in general, and have a tendency to perceive a female victim of violence presented in a more realistic context as less injured and express less sympathy for her? In addition, we seek to provide support for the ideas presented here concerning self-awareness of emotional reactivity to vio-

lent films. Do reductions in anxiety and self-awareness of reductions in negative affect facilitate changes in the evaluation of the violent depictions, and are these altered definitions of violence related to reactions to the victim of sexual assault presented in the trial?

This study also examines the impact of prolonged exposure to X-rated, nonviolent, sexually explicit films. These films usually contain depictions of heterosexual intercourse, lesbian activity, fellatio, and cunnilingus, but do not usually portray rape or other forms of sexual violence.¹ With regard to this type of film, we expect changes in beliefs about women and sexuality rather than the changes in emotional reactivity expected from exposure to the sexually violent films. Will prolonged exposure increase (a) acceptance of women as sex objects, (b) acceptance of rape myths and force in sexual relationships, (c) attributions of responsibility to the victim of rape for her own assault, and (d) result in less punitive behavior toward the assailant?

In this study males were also exposed to a third type of film commonly labeled *teenage sex films* (Ebert, 1985, p. 251). This condition was included in order to examine the possibility that the message about women as sex objects, unaccompanied by sexual explicitness, would have the same impact as the X-rated films. Typically, these movies are characterized by the inordinate amount of time major characters (nearly always teenagers) spend pursuing, talking about, or engaging in sex. Further, the movies nearly always revolve around the young males' sexual conquests. The young women in the films are primarily portrayed as objects to be ogled, or as sexual proving grounds for the male adolescents' passage into manhood. The female characters in these films generally have relatively minor parts and are often stereotypically depicted as unwilling but teasing virgins or as "class whores." In this sense, while not sexually explicit, these films do perpetuate an image of women as sex objects. The inclusion of this third film category allows us to examine the possibility that it is the message about women as sex objects rather than the sexual explicitness of the films per se that accounts for the findings. We expect that subjects exposed to large doses of either X-rated nonviolent pornographic films or R-rated teenage sex films will react similarly.

Increasing Generalizability

We also modified several of the original procedures of the Linz et al. (1984) and Zillmann and Bryant (1982) studies that may have limited the generalizability of the findings obtained in both of these investigations. We used a set of procedures that (a) provided rest periods between exposure sessions and (b) dissociated the film-viewing phase of the experiment from the dependent variable task of rating the trial victim. Also, in the present study subjects were exposed to one of two film doses, and the effects of this manipulation on desensitization to violence and on evaluations of a sexual assault victim were examined. We predict, simply, that subjects exposed to large doses of any of the film types will show greater desensitization and belief change effects than those subjects viewing fewer movies.

An additional limitation of the Zillmann and Bryant (1982) study was their use of a brief newspaper account of a rape as a dependent measure scenario. In the present study subjects watched a videotaped reenactment of a rape trial, evaluated the

alleged victim of rape, and assigned punishment to the defendant. Furthermore, they did so under two conditions: high or low victim-defendant acquaintance. Past research has suggested that subjects react differently to acquaintance and non-acquaintance rape scenarios (e.g., subjects may be far more willing to attribute responsibility to the victim for her own assault when she and the assailant are acquainted with one another; Check & Malamuth, 1983).

Method

Overview of Design and Procedures

The experiment was a $2 \times 3 \times 2 \times 2$ factorial design that included three between-subjects factors (2 or 5 films, 3 film types, acquaintance or nonacquaintance rape trial) and one within-factor (first and last day viewing ratings). The design also included two additional no-film-exposure control groups who participated only in the rape trial portion of the study. One control group participated in the acquaintance version of the trial, the other in the nonacquaintance version. The study was conducted in four sessions: prescreening, film viewing, a simulated rape trial participation, and postexperiment debriefing.

Subjects

Subjects were 156 college-age men drawn from a pool of 638 introductory psychology students at the University of Wisconsin—Madison. Subjects were randomly assigned to experimental conditions before arriving for the first film-viewing session, or in the case of no-exposure controls, before arriving for trial viewing. Forty subjects were originally assigned to each film condition; however, initial no-shows and slight subject attrition resulted in 39 subjects in the violent film condition, 38 subjects in the teen-sex condition, and 35 subjects in the sex-only condition. Forty-four subjects participated in the trial portion only.

Procedure

Prescreening session. Approximately 2 months before participation in the study, subjects completed the hostility and psychoticism subscales of the Symptom Checklist-90 (SCL-90; Derogatis & Cleary, 1977) as part of a larger battery of tests routinely administered by the Department of Psychology. Scores on these subscales were used as screening variables to eliminate subjects with psychoticism or hostility scores exceeding 1.00 (response categories for items were scored: 0 = none at all; 4 = extremely, for each symptom). Fifty-nine subjects were eliminated from the original pool by these criteria. Because the procedures potentially involved prolonged exposure to sexually violent materials over a number of days with no debriefing until the final day, we feared that subjects scoring relatively high on these measures would be most inclined to ruminate over and perhaps imitate violent scenes from the films. The average hostility subscale score for subjects who were eligible

¹ We recognize the possibility that what appears to the viewer to be nonviolent consenting sexual activity may actually be a coerced or otherwise forced performance of sexual intercourse on the part of the female actor. For a complete discussion of this issue see the Brief of Linda Marchiano Amicus Curiae, by Catherine MacKinnon, University of Minnesota Law School, filed in the United States District Court, Southern District of Indiana, Indianapolis Division, in the case: *American Booksellers Association Inc. et al., plaintiffs, vs. William H. Hudnut, Mayor of the City of Indianapolis et al., defendants*. We have assumed in using these films as stimulus materials that subjects are not aware of this possibility.

1980; 7 items, $\alpha = .71$). In addition, three new scales were constructed: (a) belief in conservative sex roles (i.e., "The intellectual leadership of the community should largely be in the hands of men rather than women"; 7 items, $\alpha = .75$); (b) endorsement of force in sexual relations ("When a man is so turned on he can't stop, it is okay for him to force a woman to have sex although she may no longer be willing"; 5 items, $\alpha = .51$); and (c) tendency to view women as sexual objects (i.e., "Most women enjoy displaying their bodies to men"; 5 items, $\alpha = .56$). Several other questions that would be appropriate for an attorney to pose during the jury selection phase of a trial but did not measure beliefs pertinent to the present study were included as distractor questions.

After the trial, subjects completed scales designed to measure (a) victim sympathy (i.e., "After hearing the facts of the case, I felt some pity for the victim," "I felt sorry for [the victim] at the conclusion of the trial"; 3 items, $\alpha = .88$); (b) victim injury (i.e., "To what degree was [the victim] physically injured?" "How painful do you think the blow to [the victim's] eye was for her?"; 5 items, $\alpha = .67$); (c) the degree to which the victim resisted her assailant (i.e., "[The victim] was forced to have sexual intercourse against her will"; 5 items, $\alpha = .96$); (d) defendant responsibility for the assault (i.e., "Generally, how responsible was [the defendant] for the sexual assault of [the victim]?" "[The defendant] deliberately waited for [the victim] downstairs with the intention of raping her"; 3 items, $\alpha = .81$); (e) victim responsibility for her own assault (i.e., "[The victim] was responsible for her own assault because she acted like she was personally interested in [the defendant]"; 5 items, $\alpha = .82$); (f) probability of guilt (1 to 9 scale); (g) verdict (guilty or not guilty); and (h) sentence assigned to the defendant if guilty (in months and years).

Debriefing Session

Subjects viewed a videotape in which one of the investigators explained the purpose of the study. Subjects in the R-rated violent condition were first alerted to the possibility that they could become desensitized to the violent content of the movies. Second, it was pointed out that because many of the scenes in the movies involved a juxtaposition of sex and violence, subjects may begin to attribute the pleasurable reactions they had to the sexual portion of the scenes to the violent portion of the movie, with the result that their feelings about the violence may change in a more positive direction. Additionally, subjects were strongly reminded that women do not seek or deserve to be victims of sexual or nonsexual violence. Debriefings for the R-rated teen-sex and X-rated sex films emphasized the following: (a) that women may be presented solely as sexual objects in the films, (b) that one problem with viewing these films is that viewers begin to believe that the sexual encounters portrayed in the films are representative of real-life situations, and (3) that frequent viewing of these materials has been shown to stimulate feelings of guilt.

Results

Manipulation Checks for the Acquaintance/ Nonacquaintance Variable

Two individual items were used to assess subject perceptions of the degree of acquaintance between the alleged victim and assailant portrayed in the rape trial. Subjects were asked "How well did the defendant know (the victim) before the night of the party?" and "To what degree were (the defendant) and (the victim) acquainted with one another before the fraternity party?" As expected, these analyses yielded significant differences between the low- and high-acquaintance conditions for both items: $t(159) = -22.60, p < .0001, M_{\text{low}} = 1.44, M_{\text{high}} = 6.83$; and $t(159) = -25.6, p < .0001, M_{\text{low}} = 1.45, M_{\text{high}} = 6.28$.

Affective States and Film Evaluations

Two separate repeated measures multivariate analyses of covariance (MANCOVAs) incorporating two between-subjects variables, film type (R-rated violent, R-rated nonviolent, and X-rated nonviolent) and film dosage (two or five films), and one repeated measures variable, test administration (first day, last day), were undertaken for the MAACL and film evaluation scores. The first MANCOVA involved only the MAACL subscales: depression, anxiety, and hostility. Covariates included (a) affect ratings obtained before subjects viewed the films and (b) subject self-reports of prior exposure to films similar to those viewed in the experiment. In all of the analyses reported below these covariates are statistically significant ($p < .05$). The MANCOVA revealed a significant main effect for film type, $F(4, 194) = 10.89, p < .0001$, a significant Day $\times$ Film Type interaction, $F(4, 194) = 3.24, p < .02$, and a significant Day $\times$ Dose $\times$ Film Type three-way interaction, $F(4, 194) = 2.24, p < .05$. Inspection of the separate univariate F s for the film type main effect indicated statistically significant effects for the depression and anxiety variables only ($p < .0001$ for both variables). Inspection of the separate univariate F s for the Day $\times$ Film interaction effect indicated statistically significant effects for both the depression, $F(2, 98) = 5.67, p < .005$, and anxiety, $F(2, 98) = 2.81, p < .06$, dependent variables but not for hostility. Inspection of the univariate F s for the Day $\times$ Dose $\times$ Film Type interaction effect revealed a significant effect for the depression subscale only, $F(2, 98) = 4.58, p < .01$.

Table 1 presents the adjusted means for all of the film viewing conditions on the anxiety and depression subscales. Examination of the adjusted means for first and last day ratings showed significant declines for the R-rated violent group for anxiety, $F(1, 99) = 5.6, p < .02$, but no significant decline for the R-rated nonviolent and X-rated groups. An analysis of simple interaction effects for the depression subscale indicated that the Dose $\times$ Days interaction was significant only for the violent film condition, $F(1, 99) = 5.47, p < .02$. Inspection of the first day and last day means for the violent group indicated that both the high- and low-dose subjects showed a decline in depression, but the low-dose subjects experienced the greatest decline.

A second MANCOVA with one covariate, subject self-reports of prior exposure to films similar to those viewed in the experiment, was undertaken for the film evaluation variables, self-reports of negative arousal, perceptions of violence, perceptions of sex and violence, degradation, and enjoyment. The analysis revealed a significant main effect for film type, $F(10, 184) = 48.24, p < .0001$, and a main effect for days, $F(5, 92) = 5.37, p < .0003$. Inspection of the univariate F s for the film type main effect indicated statistically significant effects for all of the dependent variables, $p < .0001$. Inspection of the univariate F s for the days main effect indicated a statistically significant effect for perceptions of violence, $F(1, 96) = 12.36, p < .001$, self-reported negative arousal, $F(1, 96) = 16.26, p < .0001$, and degradation to women, $F(1, 96) = 9.41, p < .003$, with significantly lower scores on the last day than on the first day.

Table 2 presents the adjusted means for all of the film-viewing

Table 1
Adjusted First-Day and Last-Day Means on MAACL Anxiety
and Depression Subscale Scores

Film condition & subscale	Two films		Five films	
	First day	Last day	First day	Last day
R-rated violent				
Anxiety	11.94	7.93	12.5	8.69
Depression	22.66	13.81	22.97	16.42
N	17		21	
R-rated teen sex				
Anxiety	7.62	6.37	7.27	5.43
Depression	16.08	13.45	14.49	9.5
N	19		21	
X-rated				
Anxiety	10.4	7.21	9.05	5.87
Depression	18.53	14.29	16.33	11.3
N	22		11	

conditions on the film evaluation scales. Further examination of the film type marginal means indicated that the R-rated violent films were judged to be far more violent and negatively arousing than either the R-rated nonviolent or X-rated films ($p < .0001$ for both dependent variables), and both the R-rated violent and X-rated nonviolent films were judged more degrading to women than the R-rated nonviolent films ($p < .01$). R-rated nonviolent films were rated as more enjoyable than either the R-rated violent or X-rated films ($p < .01$), and the R-rated violent films were rated as significantly more sexually violent than either the R-rated nonviolent or X-rated nonviolent films ($p < .001$).

There was also a marginally significant Days $\times$ Film Type interaction, $F(10, 184) = 1.49, p < .15$. Inspection of the univariate F s revealed a significant Days $\times$ Film Type interaction effect for the negative arousal self-report, $F(2, 96) = 5.77, p < .005$. Further inspection of the simple interaction effect revealed that only the R-rated violent group experienced a significant decline from first- to last-day viewing, $F(1, 100) = 24.13, p < .0001$, in self-reports of negative arousal. The R-rated nonviolent and X-rated nonviolent subjects showed non-significant changes from first- to last-day viewing.

Pretrial and Trial Effects

All trial and pretrial dependent measures were analyzed with multiple regression. There are several reasons why this type of analysis was chosen. First, because there was a no-exposure control group, the study was not a fully crossed factorial design. A traditional analysis of variance technique does not allow for a design of this type. On the other hand, through the use of dummy variable coding and effects coding as described by Cohen and Cohen (1983, pp. 181-223), all experimental conditions could be fully represented in the analysis. Second, we wished to take full advantage of certain continuous variables in the analysis, specifically, the pretest measure of rape myth acceptance that was obtained at the beginning of the semester, before subjects participated in the experimental portion of the

study. Rather than lose information and statistical power by dichotomizing this variable, we entered it in its continuous form in the multiple regression (Cohen & Cohen, 1983, p. 309). In particular, we wished to examine interactions between rape myth acceptance and our nominal variables: film type, level of exposure, and acquaintance/nonacquaintance sexual assault.

Rape empathy, sympathy, and victim injury. A two-step analysis was undertaken for these dependent variables: a priori comparisons and post hoc comparisons. The first analyses consisted of planned comparisons involving the R-rated violent film condition versus all other conditions (both film-viewing subjects and control subjects) and the film dosage variable (high- vs. low-dose and control subjects). A planned comparison was undertaken because, as indicated in the introduction, only those subjects exposed to the sexually violent films would be expected to show diminished affective reactions. We had hypothesized that subjects who have been emotionally desensitized through prolonged exposure to films depicting sexual violence would react differently to a victim of sexual violence when asked to respond along affective dimensions than would control subjects or those exposed to other types of film. These diminished affective reactions would include expressing less empathy for victims of sexual assault in general, showing less sympathy toward the specific victim presented in the sexual assault case, and judging her as less severely injured. As a second step, these a priori contrasts were followed by systematic post hoc comparisons of each film group with the control group.

Separate hierarchical regressions were undertaken for the rape empathy, trial victim sympathy, and victim injury dependent variables. Table 3 presents the results of these multiple regression analyses. The pre-experiment RMA and experimental condition variables were entered in three separate blocks. The RMA score (centered at its mean; Cohen & Cohen, 1983, p. 32) was entered in the first block. The second block consisted of effects-coded variables, representing main effects for film type (R-rated violent = 1; vs. all other conditions = -1) and film

Table 2
Adjusted First Day and Last Day Film Evaluation Scores

Film condition	First day	Last day	Marginals
R-rated violent films			
Perception of violence	27.35	24.54	25.91
Self-reported negative arousal	26.59	21.73	24.07
Degrading to women	10.7	9.33	9.99
Enjoyment	3.7	4.11	3.92
Sex and violence	9.35	7.27	8.4
R-rated teen-sex films			
Perception of violence	8.41	7.09	7.83
Self-reported negative arousal	7.91	6.56	7.28
Degrading to women	7.56	6.15	6.83
Enjoyment	8.85	9.18	9.10
Sex and violence	4.73	3.77	4.24
X-rated nonviolent films			
Perception of violence	4.79	3.61	4.35
Self-reported negative arousal	5.27	4.81	5.24
Degrading to women	9.31	8.97	9.15
Enjoyment	5.63	5.54	5.55
Sex and violence	3.76	3.79	3.78

dosage (high dose = 1; vs. low-dose and control subjects = -1). The interaction term (Film Type $\times$ Film Dosage effects-coded variables) was entered in the third block. As can be seen from Table 3, RMA was a statistically significant predictor of sympathy for the trial victim. The R-rated violent film type and dosage main effects were added to the model in Block 2. Although Block 2 did not add significant variance to the total equation ($p < .11$), examination of the individual coefficients revealed a significant effect for the R-rated violent planned contrast (X_2). The sign of the coefficient indicates that subjects exposed to R-rated violent films scored lower on the sympathy scale than other subjects. There was no significant increment in R^2 with the addition of the interaction terms in the third block.

Table 3 also presents the results of the hierarchical regression of the rape empathy dependent variable. The analysis revealed a statistically significant effect for pretest scores on RMA scale (Block 1). There was virtually no increment in R^2 with the addition of the film and dosage main effects (Block 2). A significant increment in R^2 was observed with the addition of the interaction term in Block 3. Tests of significance for the individual coefficients in the regression equation corresponding to Block 3 (presented in the bottom half of the table) revealed a significant effect for the Dosage $\times$ R-Rated Violent interaction term. The R-rated violent films variable was also significant as indicated by the t test; however, as Cohen and Cohen (1983) noted, the effect of this variable is most appropriately tested when it is first entered into the hierarchy. The sign of the coefficient for the interaction variable indicated lower scores on the Rape Empathy Scale among subjects exposed to a high dose of R-rated violence compared with all other subjects. There were no statistically significant effects for any of the independent variables on victim injury.

The second step in the analysis involved post hoc comparisons of each film group against the no-exposure control group for the sympathy and empathy dependent variables. This analysis was accomplished by creating a series of dummy variables to represent the main effects for film type (R-rated violent, X-rated nonviolent, or R-rated nonviolent vs. the no-exposure control group) and dosage level (Cohen & Cohen, 1983, p. 183). Product terms were also computed to represent the two-way and three-way interactions between these variables and RMA (measured before participation in film viewing). Three separate regressions for both the sympathy and empathy dependent variables were undertaken (e.g., the first analyses involved the regression of the sympathy dependent measure on the film variable coded such that the R-rated sexual violence group was equal to 1 and the control condition was equal to 0). These analyses were designed to provide the separate contrasts between each film exposure group and the no-exposure control group. Each of these dummy variable regressions was run in a hierarchical fashion similar to those described in Table 3. For each of these regressions, only those cases for the group that was coded as 1 and the control group were included in the analysis.

The regression equations for the sympathy variable produced one marginally significant result for block including the dose variable and the R-rated violent group versus control group comparison, F change (2, 81) = 1.76, $p < .18$. Examination of the block revealed that the coefficient for the film versus control group was also marginally significant, $t = 1.746$, $p < .09$. The

results for the empathy variable revealed a significant effect for the block involving the R-rated violent group and the dose variable, F change (2, 88) = 3.66, $p < .03$. Inspection of the coefficients for the equation revealed a significant dose effect, such that the higher the dose the less the empathy, $b = -2.84$, $t = -2.703$, $p < .008$. There were no statistically significant effects for the other film group comparisons.

Model of desensitization. We had hypothesized that subjects' perceptions of changes in anxiety and negative affect would underlie changes in the degree to which the sexually violent films were judged as degrading to women and perceived as violent. These perceptual changes, in turn, would affect emotional reactions toward a victim in a more realistic setting. Several zero-order correlations were computed among the anxiety, negative affect, degradation, perception of violence as measured on the last day of film exposure, and the victim sympathy variable for the subjects exposed to the R-rated violent films (only these subjects would be expected to exhibit desensitization effects). Last-day ratings of self-perceived negative affect were significantly correlated with ratings of how degrading the material was to women, $r = .33$, $p < .025$, and perceptions of violence, $r = .31$, $p < .025$. Last-day perceptions of violence, in turn, were correlated with ratings of sympathy for the trial victim, $r = .29$, $p < .05$. There was not a statistically significant relationship between the last-day anxiety measure and perceptions of violence; however, there was a significant correlation between subject reports of anxiety and perceptions of sex and violence, $r = .38$, $p < .025$.

Objectification, endorsement of force, RMA, and conservative sex roles. A series of dummy variables was created to represent the main effects for film type (R-rated violent, X-rated nonviolent, R-rated nonviolent, and no exposure) and dosage level (5 films, 2 films, 0 films; Cohen & Cohen, 1983, p. 183). Product terms were also computed to represent the two-way and three-way interactions between these variables and RMA (measured before participation in film viewing).² These variables were then entered into a hierarchical regression analysis in blocks for each of the pretrial dependent variables: endorsement of force in sexual relations, rape myth acceptance (measured after film viewing), the tendency to view women as sexual objects, and belief in conservative sex roles. The RMA preexperiment score comprised the first block of the regression analyses. In the second block, this variable in addition to variables coded to represent the film type, dosage, and acquaintance/nonacquaintance main effects were entered into the regression equation. The

² Coding main effects and interactions as dummy variables is most appropriate in situations where there is one group (the control group) that is to be compared with other (treatment) groups. Thus, dummy variable coding is appropriate for these data in order to compare the three film groups with a no-film-exposure control group and the high- and low-dosage groups with the no-exposure control group. All possible interactions between these variables are also compared with the no-exposure control group by this method. The reader will note that the R-rated violent group has also been included in the analysis. This group was included because we could not rule out the possibility that repeated exposure to scenes of nudity and nonexplicitly portrayed sexual intercourse that appeared in each of these films (sometimes several times within a single film) might affect subjects' perceptions in much the same way as repeated exposure to the other film types.

Table 3
Hierarchical Regression Analysis Results

Block	Set	IVs added	Cumulative R^2	F	df	R^2 increase	F
Victim sympathy							
1	Pretest RMA	X_1	.04	4.59***	1, 109		
2	+R - violent vs. others	X_2	.08	3.07***	3, 107	.042	2.25*
3	Dose variable +R - violent $\times$ Dose	X_3 X_4	.08	2.51**	4, 106	.00	0.00
Regression equations							
For X_1 : $\hat{y} = -.09X_1 + 14.47$ $t = -2.14^{***}$ ($df = 143$)							
For X_1 through X_3 : $\hat{y} = -.069X_1 + -1.19X_2 + .53X_3 + 14.34$ $t = -1.63$ $t = -2.03^{**}$ $t = .94$ ($df = 110$)							
For X_1 through X_4 : no significant change in F from Block 2 to Block 3.							
Rape empathy							
1	Pretest RMA	X_1	.14	17.07***	1, 108		
2	+R - violent vs. others	X_2	.16	6.13***	3, 106	.01	0.93
3	Dose variable +R - violent $\times$ high	X_3 X_4	.20	6.25***	4, 105	.04	6.25**
Regression equations							
For X_1 : $\hat{y} = -.27X_1 + 80.45$ $t = -4.132^{***}$							
For X_1 through X_3 : no significant change in F from Block 1 to Block 2.							
For X_1 through X_4 : $\hat{y} = -.28X_1 + .62X_2 + -1.75X_3 + -2.3X_4 + 80.35$ $t = -4.15^{***}$ $t = -2.50^{***}$							

Note. IVs = independent variables; RMA = rape myth acceptance score.
* $p < .11$. ** $p < .05$. *** $p < .01$.

third and fourth blocks included the two-way and three-way interactions.

In every regression analysis only the first block containing the RMA pretest variable alone explained a statistically significant portion of the variance. The remaining blocks of main effects and interactions produced no significant increment in R^2 . This pattern of effects was observed for all of the pretrial sexual belief variables: endorsement of force in sexual relations, $b = -.11$, $F(1, 144) = 48.85$, $p < .0001$; tendency to view women as sexual objects, $b = -.14$, $F(1, 144) = 24.93$, $p < .0001$; rape myth acceptance (postmovie-viewing), $b = .27$, $F(1, 144) = 82.67$, $p < .0001$; and belief in conservative sex roles, $b = -.21$, $F(1, 144) = 46.61$, $p < .0001$.

Victim responsibility and resistance, defendant intention, verdict, and sentence. Hierarchical regression analyses were also undertaken for each of the posttrial variables involving specific beliefs about the sexual motivations of the victim or culpability of the defendant. The same pattern of results as found for the pretest variables involving sexual beliefs emerged for two of the posttrial variables. The RMA pretest score explained a significant portion of the variance in defendant intention, $b = -.08$, $F(1, 144) = 4.9$, $p < .02$; and victim responsibility, $b = .17$, $F(1, 144) = 10.87$, $p < .001$. The addition of the remaining blocks explained little additional variance. Neither the RMA pretest score nor the other variables coded to represent the main effects and interactions were significantly related to victim resistance, verdict probability, verdict, or the defendant sentence variable.

Discussion

Exposure to Violence Against Women

Many of the original findings of Linz et al. (1984) were replicated. However, it must be noted that the data do not support our hypotheses nearly as consistently as we had expected. We note each of these exceptions.

Sexually violent material that was originally anxiety provoking and depressing became less so with prolonged exposure. The perceptual and evaluative changes found in the first study were also replicated, although there was evidence that some of these changes were not limited to the R-rated violent condition only. Subjects exposed to the sexually degrading R- and X-rated films reported seeing less violence with continued exposure (although both groups reported seeing extremely low levels of violence on both their first- and last-day evaluations), and films once found degrading to women were judged to be less so after prolonged exposure. Reports of significant declines in negative arousal to the content of the films was limited to subjects who viewed the sexually violent material.

We found few statistically significant interactions between film dosage and the first day and last day film evaluation measures. Two movies (the equivalent of about 3 hr of viewing time and approximately 20–25 violent acts) are sufficient to obtain a desensitization effect similar to that obtained after five movies. These findings suggest that desensitization to filmed violence

can occur rapidly and may parallel the findings obtained in investigations of in vivo exposure therapy. Foa and Chambless (1978), for example, reported that in 90-min sessions with agoraphobic and obsessive-compulsive individuals, self-reported anxiety begins to decrease after about 50 min. Similar patterns of fairly rapid desensitization have been found by other investigators (e.g., Chaplin & Levine, 1980). This suggests that in order to better understand the mechanisms involved in desensitization to filmed violence, a violent-act-by-violent-act rather than a movie-by-movie investigation needs to be undertaken. Future research should be directed at determining exactly when (i.e., after how many violent acts) viewers' level of emotional arousal begins to decrease.

Subjects exposed to R-rated filmed violence against women showed a tendency to be less sympathetic to the victim of rape portrayed in the trial ($p < .11$ for the block containing the dose and film variable in the hierarchical regression). More robust was the finding that the R-rated violent-film subjects were less able to empathize with rape victims in general when compared with no-exposure control subjects and subjects exposed to other types of films. Level of film exposure, however, affected specific sympathy and general empathy differently: longer film exposure was necessary to affect the general empathic response. In this regard, the findings are similar to other investigations that have found less sensitivity for rape victims following exposure to violent pornography (e.g., Malamuth & Check, 1980). It should be noted that the effects found in the present study emerged only when the R-rated sexual violence subjects were pitted against all other conditions in a planned comparison. Post hoc tests involving each group with the control group yielded only marginally significant differences for the R-rated violent group versus the control. The present study also indicated that reactions to victims in more realistic contexts need not be measured immediately after exposure to filmed violence in order for the spill-over effects to be observed. Subject evaluations of the victim in a specific rape trial and of rape victims in general made 2 days after the last exposure were affected by the violent films.

However, contrary to the findings in the original Linz et al. (1984) study, no effects were observed for judgments of victim injury. It may be the case that differences in evaluations of injury following violent film exposure will only manifest themselves in situations involving little ambiguity about an actual victim's injury. Presenting mock jurors with a picture of the injured victim, a procedure not used in the Linz et al. (1984) study, may have left little doubt that the victim was harmed and may have washed out effects for prior film exposure. Consideration of both the present study and the earlier study leads us to suspect that when subjects are presented with unambiguous information about the seriousness of the trial victim's injury, previous exposure to violent movies will do little to change that perception. To be certain of this, however, injury ambiguity must be experimentally manipulated in a single study.

Prolonged exposure to the sexual violence in the R-rated films did not affect the other objectification, endorsement of force, and posttrial measures. The fact that only the measures directly assessing emotional reactions to rape victims showed change following film exposure suggests, as we speculated in the introduction, that these films may undermine emotional reactivity to victims portrayed in more realistic contexts. The effects

appeared to occur regardless of other more cognitive appraisals of the victims.

The model proposed to account for the carryover effects was generally supported by the correlational data, but only weakly. We reasoned that subjects would use their self-perceived levels of anxiety and negative affect to define and evaluate violence and degradation. We argued that as subjects became calm in the presence of violence, material that was originally perceived to be violent and degrading would seem less so. The results revealed a positive correlation between self-reported levels of negative affect or arousal (i.e., tenseness, nausea, nervousness, looking away, etc.), and perceptions of how much violence the movies contained and how degrading the movies were to women. Perceptions of violence in the films were, in turn, significantly correlated with sympathy for the victim subsequently presented in the rape trial.

The role that cognitive factors play in the desensitization process requires further investigation. Berkowitz (1984) has offered a cognitive-neoassociationist (Anderson & Bower, 1973; Landsman & Manis, 1983) analysis of media effects, suggesting that desensitization occurs with repeated exposure to aggressive scenes because of increased acceptance of aggressive behavior. Increased thoughts about aggression (presumably thoughts about other situations where aggression is justified or appropriate) may lead to diminished anxiety about aggression. An investigation should be undertaken that examines this possibility. Subjects could be repeatedly exposed to filmed violence, and the activation of other semantically related aggressive thoughts could be monitored through a thought-listing procedure (Brock, 1967; Cacioppo, 1979; Greenwald, 1968).

Future investigations should also be undertaken to determine the extent to which the desensitization effects generalize to victims in other contexts. Averill, Malmstrom, Koriati, and Lazarus (1972) have found that whereas habituation to an accident scene viewed in isolation carried over to an identical scene embedded in a complete movie, there was little habituation to other similar but nonidentical scenes in the same movie. In contrast, Thomas et al. (1977) reported that children who watched a violent police drama subsequently appeared to be desensitized to a dissimilar violent episode as evidenced by their failure to intervene in a fight between other children. Adults who watched the same drama also showed desensitization to dissimilar films involving actual police brutality. Would we have observed the same effects in the present study if subjects had been presented with a male victim of violence in the dependent measure task?

Exposure to Sexually Degrading Depictions

The results failed to support the hypotheses derived from Zillmann and Bryant's previous studies (and previous pilot work of our own; Donnerstein, 1984) that long-term exposure to degrading images of women either in the form of X-rated, nonviolent sexually explicit films or R-rated sexually nonexplicit films will affect the subsequent beliefs and attitudes about women. We observed no statistically significant main effects or interactions for the film type, film dosage, or acquaintance or nonacquaintance trial independent variables on either the pretrial questionnaire scales assessing rape myth acceptance, belief in women as sexual objects, endorsement of force in sexual re-

ions, conservative sex roles, and rape myth acceptance or the trivial assessments of the victim, defendant, verdict, or sentence.

What accounts for the differences between the present findings and previous work? It is unlikely that the differences are due to fewer or less varied depictions of sexual activity in the present study compared with previous studies. The materials used by Zillmann and Bryant (1982) depicted heterosexual activities, mainly fellatio, cunnilingus, coition, and anal intercourse. Likewise, the X-rated films shown to subjects in the present study contained portrayals of each of these sexual activities. Also, subjects in our X-rated 5-movie exposure condition were probably exposed to the same number, if not more, individual instances of these behaviors than subjects in the Zillmann and Bryant study.

The critical difference between the two sets of stimuli may be the number of other nonsexual images of both women and men that competed with the sexual portrayals of women. The commercially released X-rated films used in the present study, although just as sexually explicit as the "stag" films used by Zillmann and Bryant (1982), contain a myriad of other scenes and scenes about women that are unrelated to depictions of promiscuity and insatiability. This is not to say that the plots and character development contained in any of the films used in this study are anything but predictable and sophomoric. But the scenes are often shot in scenic locations and women are depicted participating in normal activities such as traveling in cars, dining in restaurants, going to movies, having jobs, and so forth. Other ideas about women that compete or interfere with notions about female promiscuity and insatiability may be activated by the full-length commercial films but not activated when subjects watch a collection of short sex films.

Failure to find the expected effects suggests that it is not the simple frequency of images of female promiscuity but the ratio of these images to other (not necessarily sexually related) images that results in negative changes in attitudes about women. This suggests that either a more concentrated dose of scenes involving women in explicit sexual activity similar to the ones which viewers were exposed to in the Zillmann and Bryant (1982) study is necessary for the trivialization of rape to occur, or that a longer term of exposure to commercially released films (at least greater than five films) may be necessary for these effects to emerge.

Unfortunately, in both the Zillmann and Bryant (1982) study and the present study, the role that images of female promiscuity and insatiability play in fostering callous perceptions of women can only be speculated on. Neither study has systematically manipulated film content in an experiment designed to facilitate or inhibit viewer cognitions about female promiscuity. Future research should be devoted to delineating the effects of this intervening variable on judgments about rape victims.

References

- Anderson, J., & Bower, G. (1973). *Human associative memory*. Washington, DC: V. H. Winston.
- Brill, J. R., Malmstrom, E. J., Koriati, A., & Lazarus, R. S. (1972). Habituation to complex emotional stimuli. *Journal of Abnormal Psychology*, 80, 20-28.
- Berkowitz, L. (1984). Some effects of thoughts on anti- and prosocial influences of media events: A cognitive-neoassociation analysis. *Psychological Bulletin*, 95, 410-427.
- Bezilla, R. (1985). Programing for the mainstream. *Television & Families*, 8(1), 18-25.
- Brock, T. C. (1967). Communication discrepancy and intent to persuade as determinants of counterargument production. *Journal of Experimental Social Psychology*, 3, 269-309.
- Burt, M. R. (1980). Cultural myths and supports for rape. *Journal of Personality and Social Psychology*, 38, 217-230.
- Cacioppo, J. T. (1979). The effects of exogenous changes in heart rate on facilitation of thought and resistance to persuasion. *Journal of Personality and Social Psychology*, 37, 487-496.
- Chaplin, E. W., & Levine, B. A. (1980). The effects of total exposure duration and interrupted versus continuous exposure in flooding. *Behavior Therapy*, 12, 360-368.
- Check, J. V. P., & Malamuth, N. M. (1983). Sex role stereotyping and reactions to depictions of stranger versus acquaintance rape. *Journal of Personality and Social Psychology*, 45, 344-356.
- Cline, V. B., Croft, R. G., & Courrier, S. (1973). Desensitization of children to television violence. *Journal of Personality and Social Psychology*, 27, 360-365.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Deitz, S. R., Blackwell, K. T., Daley, F. C., & Bentley, B. J. (1982). The measurement of empathy toward rape victims and rapists. *Journal of Personality and Social Psychology*, 43, 372-384.
- Derogatis, L. R., & Cleary, P. A. (1977). Confirmation of the dimensional structure of the SCL-90: A study in construct validation. *Journal of Clinical Psychology*, 33, 981-989.
- Donnerstein, E. (1984). Research report, *Symposium on Media Violence and Pornography: Proceedings and resource book*. Toronto: Media Action Group.
- Dworkin, A. (1985). Against the male flood: Censorship, pornography, and equality. *Harvard Women's Law Journal*, 8, 1-25.
- Ebert, R. (1985). *Roger Ebert's movie home companion*. Kansas City, MO: Andrews, McMeel & Parker.
- Foa, E. B., & Chambless, D. L. (1978). Habituation of subjective anxiety during flooding in imagery. *Behaviour Research and Therapy*, 16, 391-399.
- Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin*, 99(1), 20-35.
- Greenwald, A. G. (1968). Cognitive learning, cognitive response to persuasion, and attitude change. In A. G. Greenwald, T. C. Brock, & T. M. Ostrom (Eds.), *Psychological foundations of attitudes*. New York: Academic Press.
- Howard, J. L., Reifler, C. B., & Liptzin, M. B. (1971). Effects of exposure to pornography. In *Technical report of the Commission on Obscenity and Pornography* (Vol. 8, pp. 97-132). Washington, DC: U.S. Government Printing Office.
- Landsman, J., & Manis, M. (1983). Social cognition: Some historical and theoretical perspectives. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 16, pp. 49-123). New York: Academic Press.
- Lang, P. J. (1977). Imagery in therapy: An information processing analysis of fear. *Behavior Therapy*, 8, 862-886.
- Lang, P. J. (1979). A bio-informational theory of emotional imagery. *Psychophysiology*, 16, 495-512.
- Linz, D., Donnerstein, E., & Penrod, S. (1984). The effects of multiple exposures to filmed violence against women. *Journal of Communication*, 34, 130-147.
- MacKinnon, C. A. (1986). Pornography: Not a moral issue. *Women's Studies International Forum*, 9(1), 63-78.
- Malamuth, N. M., & Check, J. V. P. (1980). Penile tumescence and

- perceptual responses to rape as a function of victim's perceived reactions. *Journal of Applied Social Psychology*, 10(6), 528-547.
- Mann, J., Berkowitz, L., Sidman, J., Starr, S., & West, S. (1974). Satiation of the transient stimulating effects of erotic films. *Journal of Personality and Social Psychology*, 30, 729-735.
- Maslin, J. (1982, November 11). Bloodbaths debase movies and audiences. *New York Times*, p. 2.
- Nordheimer, J. (1987, May 18). New issue as VCR's expand: Violent films and the young. *New York Times*, p. 1.
- Thomas, M. H. (1982). Physiological arousal, exposure to a relatively lengthy aggressive film, and aggressive behavior. *Journal of Research in Personality*, 16, 72-81.
- Thomas, M. H., Horton, R. W., Lippencott, E. C., & Drabman, R. S. (1977). Desensitization to portrayals of real-life aggression as a function of exposure to television violence. *Journal of Personality and Social Psychology*, 35, 450-458.
- Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 5, 207-232.
- Ullman, L. P., & Krasner, L. (1969). *A psychological approach to abnormal behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- U.S. Department of Justice. (1986). *Attorney General's Commission on Pornography: Final Report* (Vol. 1). Washington, DC: U.S. Government Printing Office.
- Wilkins, W. (1971). Desensitization: Social and cognitive factors underlying the effectiveness of Wolpe's procedure. *Psychological Bulletin*, 76, 311-317.
- Zillmann, D., & Bryant, J. (1982). Pornography, sexual callousness, and the trivialization of rape. *Journal of Communication*, 32(4), 10-21.
- Zillmann, D., & Bryant, J. (1984). Effects of massive exposure to pornography. In N. M. Malamuth & E. Donnerstein (Eds.), *Pornography and sexual aggression*. New York: Academic Press.
- Zuckerman, M., & Lubin, B. (1965). *Manual for the Multiple Affect Adjective Check List*. San Diego, CA: Educational and Industrial Testing Service.

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Split of JCCP—New Section on Assessment

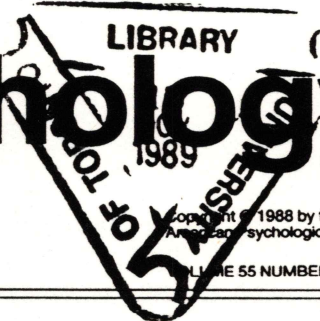
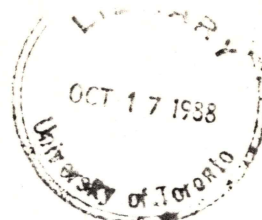
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